

AMENDMENT

In the Claims

Please amend the claims as follows.

- Sub B1
1. (Amended) A method of creating a graphical human-machine interface, comprising the steps of:
- (a) providing a computer using a first operating system;
 - (b) providing a portable computing device in communication with the computer, the portable computing device using a second operating system that is less capable than the first operating system;
 - (c) generating on the computer a software object that provides a graphical human-machine interface when operating on the portable computing device;
 - and
 - (d) transferring the software object from the computer to the portable computing device.
2. (Amended) The method of claim 1 further comprising, after step (c), the step of simulating on the computer the operation of the software object on the portable computing device.
3. (Amended) The method of claim 1 further comprising the steps of:
- (e) operating the software object to provide the graphical human-machine interface on the portable computing device; and
 - (f) transmitting information between the computer and the portable computing device.
4. (Amended) The method of claim 1 wherein the graphical human-machine interface is adapted to control at least one process parameter.
- Sub B2
5. (Amended) The method of claim 1 wherein step (c) comprises generating on the computer the software object which is processor-independent; and wherein step (c) further comprises providing a run-time engine specific to a selected processor present on the portable computing device.
- Sub B3
8. (Amended) A computer program recorded on a machine-readable medium, comprising:
- A1

33
A2
(a) a module that operates on a computer to allow a user of the computer to generate a software object that provides a graphical human-machine interface when operating on a portable computing device, the computer using a first operating system and the portable computing device using a second operating system having less capability than the first operating system;

(b) a module that operates on the computer to simulate the operation of the software object on the portable computing device; and

(c) a module that operates on the computer to transfer the software object from the computer to the portable computing device.

A3
Sub 34
11. (Amended) The computer program of claim 8 wherein the software object comprises a processor-independent graphical human-machine interface object and a run-time engine specific to a selected processor.

A4
B3
14. (Amended) A method of controlling a process, comprising the steps of:

(a) providing a computer using a first operating system;

(b) providing a portable computing device in communication with the computer, the portable computing device using a second operating system that is less capable than the first operating system;

(c) providing a software object that provides a graphical human-machine interface when operating on the portable computing device, the software object generated on the computer;

(d) operating the software object on the portable computing device to provide the graphical human-machine interface on the portable computing device; and

(e) exchanging information between the computer and the portable computing device, so as to control at least one parameter of a process.

15. (Amended) The method of claim 14 wherein step (d) comprises operating the software object on the portable computing device to display both graphical information and alphanumeric information.

RESPONSE

Claims 1-17 are pending in the Application. Claim 4 is objected to, and claims 1-17 are rejected under 35 U.S.C. §103(a) over U.S. Patent No. 5,889,516 to Hickey et al. (hereinafter "Hickey") and U.S. Patent No. 6,141,005 to Hetherington et al. (hereinafter "Hetherington"). Applicants have amended independent claims 1, 8, and 14, and also dependent claims 2-5, 11, and 15. Support for the changes to the claims may be found throughout the originally filed Specification and the Drawings, and at least at, for example, page 7, line 6 through page 8, line 9; at page 14, lines 3-20; at page 16, lines 10-22; at page 29, line 4 through page 42, line 14; and in Figures 6 through 12. No new matter is added by the amendments.

Objection to Claim 4

Applicants submit that the minor change to claim 4 addresses the objection.

Independent Claim 1

Independent claim 1 has been amended to recite "generating on the computer a software object that provides a graphical human-machine interface when operating on the portable computing device."

Hickey contains the following passages in columns 2 and 3.

FIG. 1 shows a prior art computer system using a portable terminal. A computer system 10 runs an application 12 specifically designed for a portable terminals [sic] 16. This application 12 interacts with the user 14 through the portable terminal 16. The application 12 communicates with the portable terminal 16 through a communications medium 18 such as infrared, radio frequency or even direct wire. The portable terminal 16 displays to the user 14 prompts requesting specific information. The user 14 enters replies into the portable terminal 16 in response to these requests.

If the application program is not designed to run on the portable terminal, the user will be unable to interact with the application. For instance, referring to FIG. 2, the application may require a terminal 20 with a full size keyboard 21 including functions keys, which keyboard is different from the keyboard 23 available on the portable terminal 22. The application may also require a terminal 24 whose screen size is larger than

the screen 25 on the portable terminal 22. In either situation, the application will be unable to run on the portable terminal without some form of change to the system.

FIG. 3 shows a computer system utilizing the present invention. A computer system 30 runs an application 32 that is not designed for use with a portable terminal. The present invention 34 is interposed between the application 32 and the portable terminal 36. The application 32 communicates through communications medium 33 with the present invention 34 which in turn communicates with the portable terminal 36 through a communications medium 38. Again, the portable terminal 36 displays to the user 39 prompts requesting specific information, but these prompts are generated by the present invention 34 and not the underlying application 32. The user 39 enters replies into the portable terminal 36 in response to these prompts, but these replies are again captured by the invention 34 and not necessarily passed directly to the application 32.

Hickey does not teach or suggest "generating on the computer a software object that provides a graphical human-machine interface when operating on the portable computing device." Rather, Hickey describes a device (invention 34) that is interposed between an application and a portable terminal, and that bidirectionally intercepts communications between the application and the portable terminal.

Amended claim 1 also recites "transferring the software object from the computer to the portable computing device." Hickey also does not teach or suggest this. Rather, Hickey describes translating information so that a user of a portable terminal can interact with an application even though the application is not designed to run on the portable terminal. Hickey indicates, at column 3, that "the present invention intercepts the I/O stream and translates the user interface for use on the portable terminal."

Hetherington describes "graphic calendar display methods for use in displaying locale-sensitive information such as local holidays." See column 1, lines 11-13. At column 6, lines 5-19, Hetherington describes manipulating the display of the same information to present a display in a preferred configuration.

By way of example, and with reference to FIGS. 4A and 4B, it is an object of the present invention to provide a graphical representation of a calendar that adapts its display to the conventions of the locale in which it is being run or the stored preferences of a system administrator. Thus, for example, in an English language, United States locale, weeks start on

Sunday and the text for the day of the week and month names are displayed in English. A representative display calendar for the U.S. locale is illustrated as reference numeral 26 in FIG. 4A. If the locale and language were switched to Italian language and locale, the first day of the week would be lundì (Monday) and all text displays would be in Italian. A representative display calendar 28 for the Italian locale is shown in FIG. 4B.

Hetherington does not teach or suggest "generating on the computer a software object that provides a graphical human-machine interface when operating on the portable computing device" as recited in amended claim 1. Rather, Hetherington describes using on an endpoint machine existing local object-oriented resources in the form of a pre-existing "dataless" application that functions when data conforming to an object-oriented class construct is supplied to the portable computing device. Hetherington states, at column 4, lines 36-41, that "[t]he system management framework includes a client component 24 supported on each of the endpoint machines 18. The client component 24 is a low cost, low maintenance application suite that is preferably 'dataless' in the sense that system management data is not cached or stored there in a persistent manner." Hetherington states, at column 3, lines 5-8, that "[p]referably, a given holiday object is defined according to an object-oriented class construct to facilitate implementation of the inventive holiday display calendar using local object-oriented resources (e.g., Java-based classes)." See also column 5, lines 14-25, where Hetherington describes the endpoint machine.

As also discussed above, the endpoint is a machine running the system management framework client component, which is referred to herein as a management agent. The management agent has two main parts as illustrated in FIG. 2A: the daemon 24a and an application runtime library 24b. The daemon 24a is responsible for endpoint login and for spawning application endpoint executables. Once an executable is spawned, the daemon 24a has no further interaction with it. Each executable is linked with the application runtime library 24b, which handles all further communication with the gateway.

Because each of Hickey and Hetherington fails to teach or suggest at least the generating step recited in amended claim 1, Applicants submit that the combination of

Hickey and Hetherington could not possibly have resulted in the method of amended claim 1.

Also, Hetherington, like Hickey, does not teach or suggest the transferring step of amended claim 1. Rather, Hetherington sends data using an object-oriented formalism from a server to an endpoint machine. See, for example, column 2, lines 33-35, and column 6, lines 30-41 of Hetherington. Because each of Hickey and Hetherington fails to teach or suggest at least the transferring step of amended claim 1, no combination of Hickey and Hetherington could possibly have resulted in the method of amended claim 1.

Applicants thus respectfully submit that amended claim 1 is patentable over Hickey and Hetherington, whether taken alone or in combination.

Claims 2-7 all depend from independent claim 1 and therefore also are patentable.

Independent Claim 8

Independent claim 8 as amended recites "a module that operates on a computer to allow a user of the computer to generate a software object that provides a graphical human-machine interface when operating on a portable computing device." Amended claim 8 also recites "a module that operates on the computer to simulate the operation of the software object on the portable computing device."

Each of Hickey and Hetherington fails to teach or suggest anything about either module. For example, each of Hickey and Hetherington is silent about simulating the operation of a software object. Consequently, no combination of Hickey and Hetherington could possibly have resulted in the computer program of amended claim 8.

Amended claim 8 and the claims that depend therefrom (i.e., claims 9-13) are patentable over Hickey and Hetherington, whether taken alone or in combination.

Independent Claim 14

Independent claim 14 as amended recites "providing a software object that provides a graphical human-machine interface when operating on the portable computing device, the software object generated on the computer." Amended claim 14 also recites

"operating the software object on the portable computing device to provide the graphical human-machine interface on the portable computing device."

Each of Hickey and Hetherington fails to teach or suggest "providing a software object that provides a graphical human-machine interface when operating on the portable computing device, the software object generated on the computer." Also, each of Hickey and Hetherington fails to teach or suggest "operating a software object on a portable computing device to provide a graphical human-machine interface on the portable computing device." Consequently, no combination of Hickey and Hetherington can possibly have resulted in the method of amended claim 14.

Amended claim 14 and the claims that depend therefrom (i.e., claims 15-17) are patentable over Hickey and Hetherington, whether taken alone or in combination.

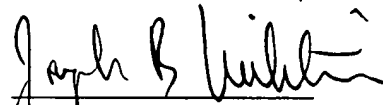
CONCLUSION

In view of the foregoing, Applicants respectfully request that the objection to claim 4 and the rejection of claims 1-17 be reconsidered and withdrawn. Applicants submit that the claims are in condition for allowance. If the Examiner believes that it would be useful to discuss any aspect of the application by telephone, Applicants' undersigned representative invites the Examiner to call at the telephone number given below.

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Respectfully submitted,



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